

Agricultural Outlook Forum 2003

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GRAINS AND OILSEEDS OUTLOOK FOR 2003¹

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Introduction

This paper provides supply, use, and price projections for 2003/04 for wheat, corn, and soybeans and products. The first official USDA supply and use projections will be published May 12, when the National Agricultural Statistics Service (NASS) publishes the first forecast of winter wheat production. Projections presented in this paper are based on the Winter Wheat Seeding report and analyses by members of the Interagency Commodity Estimates Committees for Wheat, Feed Grains, and Oilseeds. Foreign Agricultural Service personnel in Washington and various foreign offices also provided invaluable assistance in the development of the trade projections.

Higher 2003/04 ending stocks and lower prices are expected for wheat, corn, and soybeans. Expanding area and yields are expected to result in much larger 2003/04 production of wheat and corn, dropping wheat prices around 40 cents per bushel and corn prices 20 cents per bushel from their respective midpoints of the 2002/03 price ranges. Larger corn production will more than offset expanding industrial use and exports. Wheat prices be will pressured by even greater competition in the export market than in 2002/03. Wheat production will rebound in Australia and Canada from 2002's drought-reduced levels and competition from the Black Sea region declines, but remains relatively strong. Soybean prices are expected to drop around 30 cents per bushel as expanding production more than outpaces use gains.

Planted Acreage Outlook for 2003 (Table 1)

The outlook for 2003 features larger wheat and corn area, but lower soybean plantings. Combined plantings of these three major field crops are forecast to rise 2 to 3 million acres from 2002. Increased winter wheat plantings are due to strong prices at planting time last fall and the need for producers to generate greater revenue from the market. Corn plantings are expected to increase while soybeans decline. Corn loan rates have risen relative to soybean loan rates and some producers have been disappointed with soybean yields in recent years.

Wheat plantings are forecast at 63.0 million acres, up 2.6 million acres (4 percent) from 2002. However, planted area is still expected to be the fourth lowest in the last 30 years. Estimated 2003 winter wheat seedings was released in January and is up 2.5 million acres from last year, with most of the rise in hard red winter (HRW). Contrary to earlier expectations, soft red winter (SRW) plantings are down. Prolonged wet conditions led to reduced seedings in parts of the Delta, Southeast, and Atlantic Coast,

¹This papers incorporates contributions by analysts from the World Agricultural Outlook Board, the Economic Research Service, the Foreign Agricultural Service, and the Farm Service Agency.

but area is up sharply in the Midwest. White Winter (WW) seedings are up 9 percent from last year, but contribute little to the rise in aggregate winter wheat seedings. Little change is expected in spring wheat area in 2003, with a small increase in durum area offsetting a drop in other spring wheat acres.

Even though drought sharply cut production in the United States, Canada, and Australia in 2002/03, gains in wheat prices have been much less than earlier expectations. Importers have switched to much lower priced wheat from Russia, Ukraine, and other “minor” exporters. Thus, U.S. prices are down sharply from the highs of early last fall. Alternative crops are offering better returns than spring wheat. For example, contract prices for malting barley are reportedly up sharply from last year due to drought reduced supplies in the United States and Canada.

Corn planted area is forecast at 80.5 million acres in 2003, up around 1.5 million acres from 2002. Much of the gain is expected because of farmers switching from soybeans to corn in parts of the Midwest due to higher expected returns for corn. Also, despite widespread hot, dry conditions last summer, corn yields were down only 6 percent from 2001 when yields were the second highest on record. In areas that received timely rains, last year’s yields were record high, specifically in Iowa and Minnesota. Given better yield prospects for corn and attempts to reduce disease and pest problems, there are indications some Corn Belt producers are planting two consecutive years of corn followed by one year of soybeans.

The area increase for corn will be limited by reductions in parts of Nebraska, Kansas, and Colorado where lack of irrigation water will force some producers to reduce corn planting. Also, the sharp rise in natural gas prices in recent months will make it expensive for producers using natural gas to run irrigation pumps. With continuing dry conditions in much of the western growing area, producers will need to increase the amount of water pumped from wells to offset the lack of surface water.

Soybean plantings for 2003 are forecast at 72.2 million acres, down about 1.5 million acres from 2002. Although average net returns and crop rotations favor a shift toward corn this year, producers in the Northern Plains may again expand soybean area, following a trend that began in the mid-1990s. Northern Plains expansion, however, will not be enough to offset area reductions elsewhere.

Table 1. Wheat, Corn, and Soybean Planted Acreage, 1996-2003F (million acres)

	1997	1998	1999	2000	2001	2002	2003F
Wheat	70.4	65.8	62.7	62.6	59.6	60.4	63.0
Corn	79.5	80.2	77.4	79.6	75.8	79.1	80.5
Soybeans	70.0	72.0	73.7	74.3	74.1	73.8	72.2
Total	219.9	218.0	213.8	216.4	209.4	213.2	215.7

F = Forecast

Totals may not add due to rounding.

Source: National Agriculture Statistics Service

Wheat Supply, Demand, and Price Outlook for 2003/04 (Table 2)

Wheat Supplies: The major questions about potential U.S. wheat production center around harvested acres and yields, especially given the current dry conditions in parts of the Plains, prolonged wet conditions in the Delta, and cold weather in the Midwest. Table 2 shows a forecast harvested area of 53.4 million, up more than 7.5 million from 2002. However, last year's harvested acres were the lowest since 1970, and the harvested-to-planted ratio the smallest since 1936. An unusually large percentage of both winter and spring wheat planted acres was not harvested for grain. In 2002, some of the increase in winter wheat seeded area was intended to be hayed and/or grazed instead of harvested for grain. However, drought resulted in increased abandonment and planting of another crop or increased haying and/or grazing in order to salvage something from the crop. The harvested area in 2003 is projected using a 10-year average harvested-to-planted ratio by State. While the assumed harvested-to-planted ratio is above the levels of the past two years, it is well below those in the mid-to-late 1990s. The assumed yield for 2003 is also a 10-year average by State and results in a projected production of 2,065 million bushels, up almost 450 million from 2002. Larger production more than offsets lower carryin stocks, leaving 2003/04 supplies up 140 million bushels from a year earlier.

Wheat Domestic Use: Food use will likely increase, but at a rate less than growth in the population due to changes in diets and baking technology that has extended the shelf life of bakery products. Feed and residual use, at 225 million bushels, is up sharply from the unusually small 100 million bushels expected in 2002/03. Reduced wheat prices, especially during harvest, will promote the use of wheat for feeding. Hog and poultry feeders in the Southeast and Atlantic Coast areas and cattle and hogs feeders in the Plains likely will see relatively high prices for corn during the early summer. These areas had poor corn and sorghum crops in 2002 and will have to source corn for feeding from a greater distance than usual.

Wheat Exports: U.S. 2003/04 exports are expected to fall slightly below the 900 million bushels expected in 2002/03, which already are the smallest level of exports since the 610 million in 1971/72. The U.S. will face increased competition from expanding production in the major foreign exporters, especially Australia and Canada, and continued strong competition from Russia, Ukraine, and Eastern Europe.

A year ago no one would have forecast U.S. exports would drop to a 30-year low if they had known that the combined crops of Argentina, Australia, and Canada would shrink 36 percent from year-earlier levels and the EU would be the world's largest importer. Argentina had the smallest crop since 1995/96 as the economic chaos at planting time reduced area and a rainy harvest cut yields. Drought slashed production in Australia and Canada, and their wheat crops are the smallest since 1994/95 and 1974/75, respectively. Smaller crops in these three countries removed almost 20 million tons from the world's 2002/03 export supply. The near record crop in the EU is helping offset (exports up 3.5 million tons) the lower exportable supplies in the other three major foreign exporters, but the major reason for the weak demand for U.S. wheat is due to the expanding shipments by the traditionally "minor" exporters. The combined exports of Russia, Ukraine, Kazakstan, and India are up more than 11.5 million tons from last year. Global imports are down around 5 million tons, with Iran's 3 million ton decline (due to a huge crop) accounting for much of the reduction. Many importers switched to the dramatically lower priced wheat from the "minor" exporters instead of being forced to bid for the dwindling stocks in the United States.

For 2003/04, U.S. exports are expected to decline slightly from the poor showing in 2002/03 due to increased competition from the major foreign exporters and declining, but still large, supplies in the “minor” exporters. Assuming normal weather, the combined wheat production of the major foreign exporters are expected to be up around 20 million tons from 2002/03 as plantings and yields rebound in Argentina, Australia and Canada. Meanwhile, reduced winter wheat plantings and increased winterkill are expected to drop production in Russia and Ukraine. Lower area is also expected to lead to a lower crop in India. While large carryin stocks will partially offset the lower crops, combined exportable supplies will be down in the “minor” exporters. EU purchases will drop from 2002/03's record level due to the new import regime, but import needs in much of the world depends on weather conditions in coming months. As usual, imports by China are the biggest unknown.

Wheat Ending Stocks and Market Prices: Total use in 2003/04 is expected to increase around 5 percent but supplies are up slightly more. Thus, ending stocks, at 490 million bushels, are only slightly higher than a year earlier. Prices received by producers are projected down 40 cents from the midpoint of the price range for 2002/03 to \$3.20 per bushel, due to continued poor exports. However, if crops in the major foreign exporters do not rebound strongly from 2002/03, U.S. and global prices will have to rise sharply to ration limited supplies because the “minor” exporters will not be able to take up as much of the slack as they have in 2002/03.

Corn Supply, Demand, and Price Outlook for 2003/04 (Table 3)

Corn Supplies: Corn harvested acreage for grain is forecast at 73.5 million acres based on the average harvested-to-planted ratio for crop years 1999, 2000, and 2001. The trend yield of 139.7 bushels per acre is based on a simple linear trend fit over crop years 1960-2001 and is well above the 130 bushels per acre in 2002 and the 1994 record of 138.6. Thus, corn production is forecast at 10,270 million bushels, up nearly 1.3 billion from 2002. However, reduced carryin stocks will be partially offsetting and total supplies are projected at 11.2 billion bushels, up around 600 million from 2002/03.

While most analysts expect corn acres to expand in 2003, estimates vary considerably. Some forecasts call for as much as a 2.5 million acre expansion, mostly at the expense of soybeans. Also, some analysts are expecting higher yields, but the current dry conditions in parts of the western corn belt and plains are keeping many yield forecasts in check.

Corn Feed and Residual Use: Forecast corn feed and residual use is up 50 million bushels in 2003/04 compared with 2002/03's drop of more than 275 million bushels from a year earlier. In 2002/03 grain consuming animal units (GCAU's) are 1.6 million units below 2001/02. The pig crop was down slightly over a million head in June-November 2002 and intended farrowings in December 2002-May 2003 are 2 percent below a year earlier. However, with a large corn crop lowering feed prices, pork producers are expected to increase the number of sows farrowing and pork production for 2004. The dairy sector is projected to increase milk production slightly in 2004, following a 1-percent gain in 2003. In 2004, broiler production is expected to increase 2 to 3 percent from 2003, while gains in turkey and egg production will be less. Thus, poultry sector feed needs will strengthen. Beef production in 2004 is expected to show less of a decline than the 4-percent drop expected in 2003.

Corn Food, Seed, and Industrial Use:

For 2003/04, food, seed, and industrial (FSI) use is expected to increase 4 percent from the 2002/03 level. Most uses are expected to show little change, or only rise slightly, from a year earlier. However, corn used for ethanol production is projected to increase 9 percent from the already high levels of 2002/03. FSI use of corn in 2003/04 is forecast to increase 4 percent to 2.36 billion bushels following a 10 percent gain in 2002/03. While most uses of corn are projected to increase somewhat, ethanol's 29-percent rise accounts for most of the gain. California's mandated January 2003 switch from methyl tertiary butyl ether (MTBE) to ethanol was postponed until January 2004. However, several California refineries have or are modifying their facilities to be able to switch oxygenates and some alcohol is already being used, with more expected in the near future. In addition, several other States have banned or are trying to ban MTBE, sharply boosting the demand for ethanol. As a result, ethanol producers are expanding existing facilities and building new plants rapidly.

Corn used to make high fructose corn syrup (HFCS) is projected to increase around 1 percent in 2002/03 and 2003/04. Use of corn to produce glucose and dextrose is expected to show a slight increase in 2003/04 after dropping during the previous two years. Corn used in starch production is forecast to show little gain in 2003/04 after a forecast rise of about 2 percent in 2002/03. Little gain from 2002/03 is also expected in use of corn for the production of beverage and manufacturing alcohol, while corn used in cereals and other products are forecast to grow about 1 percent, near the rate of population increase.

Corn Exports: The global setting for feed grain trade in 2002/03 is more favorable than for wheat, but U.S. corn exports will continue to face strong competition from corn from Argentina and China and feed wheat from India and the Black Sea region. However, the 20-cent-per-bushel drop in the farm price of corn will make U.S. corn more competitive. As usual, China's corn exports are the biggest unknown. Corn plantings in China are expected to decline as some producers switch to soybeans in response to various Government incentives and a reduced protection price for corn. However, the volume of China's corn exports will continue to largely depend on the level of Government export incentives. U.S. corn exports are projected at 1,925 million bushels, up 100 million from the 2002/03 forecast.

Corn Ending Stocks and Market Prices: Ending stocks are projected at 1,274 million bushels, a rise of almost 350 million from forecast 2002/03 level. The ending stocks-to-use ratio of 12.8 percent is well above the 9.6 forecast for 2002/03 estimate but below most levels seen since 1997/98. The projected farm price of \$2.15 is down 20 cents from the midpoint of the 2002/03 range.

Soybean Supply, Demand, and Price Outlook for 2003/04 (Table 4)

Soybean Supplies: Despite a drop in prospective acreage, soybean production is expected to increase 3 percent to 2,815 million bushels on the strength of higher yields. Soybean harvested area is forecast at 70.9 million acres based on the average planted-to-harvested ratio for 2000-2002. The 2003 soybean yield is projected at 39.7 bushels per acre, above last year's yield of 37.8 bushels per acre, but below the 1994 record of 41.4 bushels per acre. The projection is based on regional trends for 1978-2002, which

capture the impact of acreage expansion outside the higher-yielding Corn Belt states. Disease pressure and dry conditions in key areas have limited yield growth in recent years. Soybean supplies for 2003/04 are projected just 1 percent above 2002/03 as higher production is partly offset by lower beginning stocks, projected at a 6-year low of 165 million bushels.

Soybean Domestic Use: Domestic disappearance of soybeans is projected almost unchanged from 2002/03 at 1,840 million bushels. Soybean crush for 2003/04 is forecast at 1,670 million bushels, up 1 percent from year-earlier levels. Domestic soybean meal demand is projected to grow at a moderate 1-2 percent, limited by slow expansion in poultry and hog production and declining beef production. Increased availability of other protein meals also will temper domestic soybean meal demand. Soybean meal prices are projected at \$162.50 per ton, down from the \$167.50-per-ton midpoint of the 2002/03 projected range. Domestic soybean oil use is projected to increase about 2 percent from 2002/03. Tight supplies of soybean oil and increased availabilities of other vegetable oils will limit soybean oil consumption growth. Despite sharply reduced soybean oil export prospects, stocks are projected to decline to 1.5 billion pounds, the lowest level in 5 years. Prices are projected to average 22 cents per pound, up slightly from projected 2002/03 levels. Increased global availabilities of other vegetable oils and oilseeds will prevent prices from rising further.

Soybean Export Demand: Recovery in foreign oilseed and oilseed meal output from below-average 2002 crops in China, the European Union, India, Canada, and Australia is anticipated in 2003. While world oilseed output increased just 1 percent in 2002/03, relatively strong vegetable oil prices and a return to more normal yields may result in up to a 5 percent increase in global oilseed output in 2003/04. Expanded production of alternative protein meals may limit the rate of increase in global soybean meal use and trade. Thus, foreign consumption of soybean meal may grow more moderately in 2003/04, versus a projected 5-6 percent increase for 2002/03. While larger soybean crops in South America are still likely, area may not expand quite as rapidly as in recent years because of a weaker outlook for soybean prices. However, near record carryover stocks will again make Brazil and Argentina potent competitors in the international export market.

Imports of soybeans and soybean meal by the EU, still the world's largest market, are likely to continue to experience little growth in 2003/04. Greater availability of domestically produced rapeseed and sunflowerseed meals will likely limit growth in soybean and soybean meal import demand. Also, the EU's meat export prospects are clouded as Russia, an important EU market, is imposing new import quotas on meat. This will slow expansion of EU livestock feeding and in turn the demand for protein meal.

Much of the world's 2003/04 soybean demand growth will come from China and other Asian markets. Impressive rates of growth are also occurring in Latin America, the Middle East and North Africa. However, increased availability of domestic and foreign rapeseed supplies may somewhat temper growth in China's 2003/04 soybean imports. More rapeseed crushing by Japan is also likely to trim soybean imports there in 2003/04.

U.S. soybean exports are projected just 1 percent higher in 2003/04 at 950 million bushels. A relatively small increase in total domestic supplies, compared to a much larger increase in foreign oilseed supplies, will limit opportunities for export growth. Similarly, 2003/04 U.S. soybean meal exports are expected to increase only marginally. U.S. export market shares for 2003/04 are expected to stabilize near this

year's level. For 2002/03 the U.S. export market share is projected at 41 percent of world soybean exports and 11 percent of global soybean meal trade.

Following 2 years of relatively high U.S. exports of soybean oil, the outlook for 2003/04 is considerably dimmer. Tighter domestic supplies, abundant output by foreign competitors, and better domestic crops in major vegetable oil importing countries (particularly India and China) will limit U.S. trade. In addition, world palm oil production should begin to show signs of acceleration after 2 years of modest growth. Soybean oil exports next season are projected 36 percent lower at 1.4 billion pounds. The U.S. share of world soybean could drop to 7 percent in 2003/04, down from 10 percent in 2002/03.

Soybean Ending Stocks and Market Prices: Soybean ending stocks for 2003/04 are forecast at 195 million bushels, up 30 million bushels from 2002/03. The ending stocks-to-use ratio of 7 percent is above the 2002/03 projected level, but would still be the second lowest since 1996/97. Despite relatively tight stocks, market prices are projected to average \$5.10 per bushel in 2003/04. This is down 30 cents from the \$5.40 per bushel midpoint of the 2002/03 projected range. Increased South American supplies in recent years, among other factors, have weakened the correlation between U.S. ending stocks and price. With the stocks-to-use ratio at 7 percent, prices would likely have averaged above \$6.00 per bushel just 5 years ago if historical relationships still applied.

Table 2. Wheat: Supply, Demand, and Price, 2001/02-2003/04

	2001/02	2002/03	2003/04
		1/	2/
Area planted (mil. acres)	59.6	60.4	63.0
Area harvested	48.6	45.8	53.4
Yield (bu./acre)	40.2	35.3	38.7
Production (mil. bushels)	1,957	1,616	2,065
Beginning Stocks	876	777	445
Imports	108	75	100
Supply	2,941	2,469	2,610
Feed and residual	192	100	225
Food, seed, & industrial	1,010	1,024	1,020
Total Domestic Use	1,202	1,124	1,245
Exports	961	900	875
Total Use	2,164	2,024	2,120
Ending Stocks	777	445	490
Farm Price (\$/bushel)	2.78	3.60	3.20
		3/	

1/ Forecast. 2/ Projected. 3/ Midpoint of forecast range

Table 3. Corn: Supply, Demand, and Price, 2001/02-2003/04

	2001/02	2002/03	2003/04
		1/	2/
Area planted (mil. acres)	75.8	79.1	80.5
Area harvested	68.8	69.3	73.5
Yield (bu./acre)	138.2	130.0	139.7
Production (mil. bushels)	9,507	9,008	10,270
Beginning Stocks	1,899	1,596	929
Imports	10	15	10
Supply	11,416	10,619	11,209
Feed and residual	5,877	5,600	5,650
Food, seed, & industrial	2,054	2,265	2,360
Total Domestic Use	7,931	7,865	8,010
Exports	1,888	1,825	1,925
Total Use	9,820	9,690	9,935
Ending Stocks	1,596	929	1,274
Farm Price (\$/bushel)	1.97	2.35	2.15
		3/	

1/ Forecast. 2/ Projected. 3/ Midpoint of forecast range.

Table 4. Soybeans: Supply, Demand, and Price, 2001/02-2003/04

	2001/02	2002/03	2003/04
		1/	2/
Area planted (mil. acres)	74.1	73.8	72.2
Area harvested	73.0	72.2	70.9
Yield (bu./acre)	39.6	37.8	39.7
Production (mil. bushels)	2,891	2,730	2,815
Beginning Stocks	248	208	165
Imports	2	2	5
Supply	3,141	2,940	2,985
Crush	1,700	1,655	1,670
Seed, & residual	171	180	170
Total Domestic Use	1,870	1,835	1,840
Exports	1,063	940	950
Total Use	2,933	2,775	2,790
Ending Stocks	208	165	195
Farm Price (\$/bushel)	4.38	5.40	5.10
		3/	

1/ Forecast. 2/ Projected. 3/ Midpoint of forecast range.

Table 5. Soybean Meal: Supply, Demand, and Price, 2001/02-2003/04

	2001/02	2002/03	2003/04
		1/	2/
	Thousand short tons		
Beginning Stocks	383	240	250
Production	40,292	38,970	39,760
Imports	143	240	240
Supply	40,818	39,450	40,250
Domestic Use	33,077	33,200	33,700
Exports	7,502	6,000	6,300
Total Use	40,578	39,200	40,000
Ending Stocks	240	250	250
Avg. Meal Price (\$/ton)	167.73	167.50	162.50
		3/	

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range.

Table 6. Soybean Oil: Supply, Demand, and Price, 2001/02-2003/04

	2001/02	2002/03	2003/04
		1/	2/
	Million pounds		
Beginning Stocks	2,877	2,360	1,710
Production	18,898	18,785	18,790
Imports	46	65	70
Supply	21,821	21,210	20,570
Domestic Use	16,942	17,300	17,600
Exports	2,520	2,200	1,400
Total Use	19,461	19,500	19,000
Ending Stocks	2,360	1,710	1,570
Avg. Oil Price (\$/lb.)	0.165	0.218	0.220
		3/	

1/ Forecast. 2/ Projected. 3/ Mid-point of forecast range.